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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,111	01/17/2002	Kevin E. Brehmer	ZRAN.022US0	1813
36257 7590 07/30/2007 DAVIS WRIGHT TREMAINE LLP 505 MONTGOMERY STREET SUITE 800 SAN FRANCISCO, CA 94111			EXAMINER QUIETT, CARRAMAH J	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 07/30/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	Application No. 10/053,111	Applicant(s) BREHMER ET AL.	
	Examiner Carramah J. Quiett	Art Unit 2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8, 9 and 13-26 is/are pending in the application.
- 4a) Of the above claim(s) 6, 8, 9, 13-23 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2622

## DETAILED ACTION

### *Response to Amendment*

1. The amendment(s), filed on 11/15/2006, have been entered and made of record. Claims 5-23 have been canceled, Claims 1-4 and 24-26 are pending, and Claim 26 is withdrawn.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-4 and 24-25 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 24 and 25** are rejected under 35 U.S.C. 102(b) as being anticipated by Sauer et al. (#5,969,758).

For **claim 24**, Sauer teaches that in an image sensor that correlates a first sample of a first signal during a first interval of a photo detector and a second sample of the first signal during a later interval to produce a luminance signal (col. 7, lines 21-29), a method comprising:

detecting that the first signal is slewing excessively rapidly (substantially reduces FPN) during the first interval (col. 4, line 62 – col. 5, line 9); and

in response to said detecting, limiting the value of the first sample (col. 6, lines 4-18);

whereby the image sensor produces an output of improved accuracy by abating an error in the luminance signal due to excessively rapid slewing (col. 4, line 62 — col. 6, line 18).

Sauer teaches that the initial voltage is lowered in accordance with the intensity of the light integrated during the integration period. The voltage is clamped to avoid blooming. Please read col. 6, lines 5-12.

For **claim 25**, Sauer teaches the method wherein: the error (blooming) is an image inversion due to over-saturation (col. 6, lines 4-18). Sauer teaches that the initial voltage is lowered in accordance with the intensity of the light integrated during the integration period. The voltage is clamped to avoid blooming. Please read col. 6, lines 5-12.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fossum et al. (#5,841,126) in view of Sauer et al. (#5,969,758).

As for **claim 1**, Fossum discloses a method for image sensing (second embodiment) comprising the acts of:

producing, from a photo detector, a plurality of detected electronic signals responsive to an optical image (col. 7, lines 44-64).

amplifying, with a column buffer amplifier, signals selected from the detected electronic signals to produce a plurality of amplified signals (col. 7, lines 44-53);

Art Unit: 2622

sampling, with a correlated double sampler, signals selected from the amplified signals to produce a plurality of sampled signals (col. 8, lines 27-38); and

clamping, by a clamp circuit, at least one signal selected from the sampled signals (col. 6, line 38 – col. 7, line 37; col. 8, lines 27-44).

However, Fossum does not expressly teach clamping, by a clamp circuit, at least one signal selected from the sampled signals in response to a detecting of at least one over-saturation condition; whereby image inversion is at least partially abated.

In a similar field of endeavor, Sauer teaches clamping, by a clamp circuit, at least one signal selected from the sampled signals in response to a detecting of at least one over-saturation condition; whereby (inherently) image inversion is at least partially abated (col. 6, lines 4-18). This is inherent because Sauer teaches that the initial voltage is lowered in accordance with the intensity of the light integrated during the integration period. The voltage is clamped to avoid blooming. Please read col. 6, lines 5-12. In light of the teaching of Sauer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Fossum detecting of at least one over-saturation condition; whereby image inversion is at least partially abated in order to prevent blurring and other related image artifacts (Sauer, col. 26, lines 4-19).

For **claim 2**, Fossum, as modified by Sauer, discloses the method wherein the photo detector comprises a photo diode (inherently, col. 5, lines 28-40; col. 8, lines 27-28).

For **claim 3**, Fossum, as modified by Sauer, discloses the method wherein the photo detector comprises a photo gate (col. 7, lines 44-64).

Art Unit: 2622

7. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Fossum et al. (#5,841,126) in view of Sauer et al. (#5,969,758) as applied to claim 1 above, and further in view of Koyama et al. (#5,786,713).

For **claim 4**, Fossum, as modified by Sauer teaches the method with a clamp circuit (Fossum, col. 7, lines 44-53). However, Fossum in view of Nitta does not expressly teach the method wherein the clamp circuit is implemented in a technology selected from a list consisting of N-well CMOS process technology and of P-well CMOS process technology. In a similar field of endeavor, Koyama teaches a method wherein the clamp circuit is implemented in a technology selected from a list consisting of N-well CMOS process technology and of P-well CMOS process technology (fig. 37; col. 20, lines 41-47). In light of the teaching of Koyama, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Fossum's clamp circuit in a technology selected from a list consisting of N-well CMOS process technology and of P-well CMOS process technology in order to control the integration the imaging device (Koyama, col. 20, lines 41-62).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (571) 272-7316. The examiner can normally be reached on 8:00-5:00 M-F.

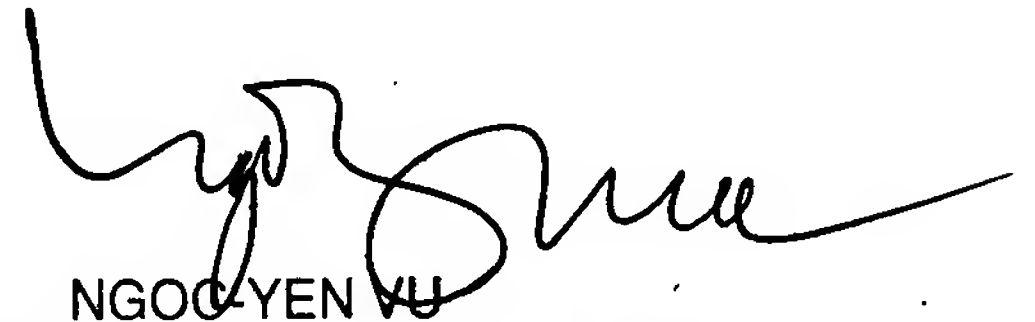
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJQ

July 12, 2007



NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER